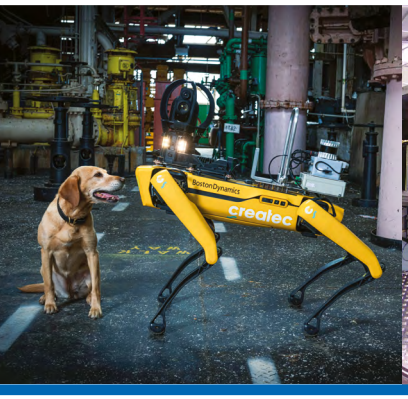

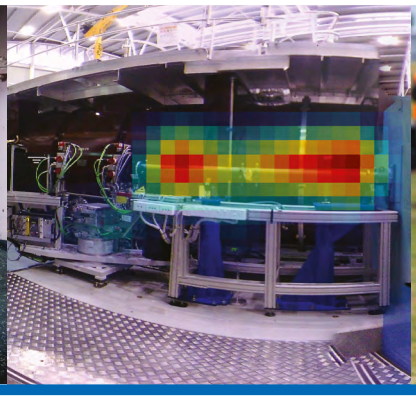

CONCEPT PAPER

NEA Workshop on the Innovative Techniques and Technologies to Support Characterisation and Decommissioning of Complex and Legacy Sites

29 November to 1 December 2022
Boulogne-Billancourt, France

OECD
BETTER POLICIES FOR BETTER LIVES

NEA
NUCLEAR ENERGY AGENCY

NEA Workshop on the Innovative Techniques and Technologies to Support Characterisation and Decommissioning of Complex and Legacy Sites

CONCEPT PAPER

29 November – 1 December,
2022

Background:

The Nuclear Energy Agency (NEA) Working Party on Technical, Environmental and Safety Aspects of Decommissioning and Legacy Management (WPTES)[1] is organising an international workshop on Innovative Techniques and Technologies to Support Characterisation and Decommissioning of Complex and Legacy Sites. Topics will include innovative site and radiological characterisation, as well as decommissioning techniques and technologies. The workshop will also provide information on application of existing technologies to new problems including lessons learnt, best practices and overcoming challenges associated with use of existing technologies. The workshop will welcome participants from various fields of expertise involved in decommissioning of complex and legacy sites including implementers, government/regulatory agencies, academia, and researchers. Regulators are part of the audience for this workshop and presentations on regulatory concerns and perspectives should be included.

The workshop contributions and main discussion topics will be summarised in workshop proceedings which will ultimately provide input to a WPTES technical report to better understand (i) the state of the art in technologies and techniques related to characterisation, and decommissioning of complex and legacy nuclear sites and installations, (ii) key issues and challenges associated with implementation of technologies and techniques, and (iii) good practices and methods for implementation of techniques and technologies considering risk to workers and members of the public, and waste generation.

[1] https://www.oecd-nea.org/tools/mandates/index/id/9918/lang/en_gb

Objectives:

The workshop aims to:

- To better understand current state of art of technologies and techniques used in characterisation and decommissioning of complex and legacy sites[2] (e.g., radiological and site characterisation, decontamination, dismantling, demolition, material/waste management, and risk assessment).
- To better understand challenges to successful implementation of innovative techniques and technologies including additional research, regulatory acceptance, and availability of guidance.
- To better understand how risk assessment influences decommissioning activities including characterisation, decontamination, remedial and final status survey decision-making.
- To better understand good practices and methods for implementation of techniques and technologies
- To provide recommendations for future work of the WPTES task groups and WPTES Expert Group.

Technical sessions will focus on obtaining information to support the five objectives. Conference proceedings will be published presenting major findings and conclusions from the workshop presentations and panel discussions. Rapporteurs will be available to take notes and assist session leads with summarising key points. The results obtained from the workshop will be used to identify data gaps either explicitly or implicitly determined from a review of workshop findings and recommendations.

Workshop format:

It is proposed to organise a three-day workshop consisting of 4 sessions (including an opening and closing/summary session). They will include plenary presentations, followed by either panel discussions or break-out sessions where all the participants will work on understanding, brainstorming and providing solutions to key issues. The preliminary outline is as follows (a separate agenda will be developed):

- Welcome session:
  - Welcome remarks
  - Introduction of participants
  - Keynote Speaker(s)
- Session 1: Innovative Techniques and Technologies for Radiological and Site Characterisation
  - Sub Topic 1.1: Innovative Techniques and Technologies for Radiological and Site Characterisation (General)
  - Sub Topic 1.2: Innovative Techniques and Technologies for Radiological Characterisation of Buildings and Structures
  - Sub Topic 1.3: Innovative Technologies/Modeling/Tools to support, D&D

[2] Complex and legacy sites mean different things to different member countries. In this context, complex decommissioning sites could include nuclear power plants, fuel cycle facilities, radioactive materials sites with buried or subsurface residual radioactivity. Legacy sites include buildings and structures, as well as surface and subsurface soils and water. Legacy sites are characterized as those having radioactivity which is of concern to the regulator; and for which clean-up or remediation is incomplete (OECD, 1999). Typically, legacy sites are "unrecognised" (e.g., a remote and unused uranium mining/milling site), or "abandoned" (e.g. a building historically used for manufacture of radium products) or are "long-term unused or redundant" (e.g., an old hot cell facility not currently in use but located on a controlled or regulated site)(OECD, 1999).

    - Sub Topic 1.4: Innovative Techniques and Technologies for Surveys of Sub-surface Soils and Groundwater
    - Sub Topic 1.5: Innovative Techniques and Technologies for Radiological and Site Characterization of Land
- Session 2: Innovative Decontamination and Decommissioning Technologies and Good Practices for Implementation of Technologies
    - Sub Topic 2.1: General Session Innovative Technologies to support D&D
    - Sub Topic 2.2: Innovative Technologies to support D&D
- Summary Session:
    - Summary by Session Chairs
    - Plenary discussion of key items
    - Workshop Chair final remarks

Venue:

Only registered participants will be allowed access. Please have the pre-registered QR and an ID ready. Plan with 15-30 min for admission, at least on the first day:

Address:

Nuclear Energy Agency
46, quai Alphonse Le Gallo
92100 Boulogne-Billancourt
France
How to get to the NEA

Meeting Room:

BB Auditorium

Workshop language:

Working language is English.

Registration:

Interested participants are requested to complete the registration on the public workshop webpage (link below) by **15 November 2022**. The number of workshop attendees is restricted based on the venue and hygiene measures in place.

Workshop webpage:

The workshop webpage can be accessed through the following link:
https://www.oecd-nea.org/jcms/pl_71664/

Expected outcome:

As a result of the workshop, organisers expect to publish conference proceedings to provide information on the state of the art, lessons learnt and good practices related to innovative characterisation and decommissioning technologies. The conference

proceedings will provide recommendations for future work on the WPTES task groups as well as provide information to guide the scope of work of the Expert Group on Innovative Characterisation and Decommissioning Technologies and Techniques and a future technical report in this area.

Workshop Chair:

The workshop will be (co-)chaired by:

- Cynthia BARR NRC, US

Programme Committee:

The Programme Committee (PC) members for the developing of the programme and preparation for the workshop are:

Cynthia BARR	NRC, US
Steve HARDY	NDA, UK
Thomas BRAUNROTH	GRS, Germany
Norbert MOLITOR	Plejades, Germany
Marc PEYROT	CEA, France
Emilio GARCIA NERI	ENRESA, Spain
Rick REID	EPRI, US
Kim BAINES	IAEA
Sofía LUQUE	CNS, Spain
Arne LARSSON	Cyclife Sweden AB, Sweden
Vincent GORGUES	CEA, France
Rebecca TADESSE	NEA Head of RWMD Division
Martin BRANDAUER	NEA RWMD
Zhuoran LI	NEA RWMD

Key preparatory milestones:

Opening of Registration	15 July 2022
Deadline for submission of presentation	08 November 2022
Deadline of Registration	15 November 2022

Contacts:

For more information regarding this document, please contact Martin BRANDAUER (Martin.BRANDAUER@oecd-nea.org) and Zhuoran LI(Zhuoran.li@oecd-nea.org).

For further information regarding the logistics, please contact Teresa ALONSO DE VILLAPADIERNA (teresa.villapadierna@oecd-nea.org).

Related links:

NEA	www.oecd-nea.org/
WPTES	https://www.oecd-nea.org/tools/mandates/index/id/9918/lang/en_gb
Workshop Webpage	https://www.oecd-nea.org/jcms/pl_71664/

Nuclear Energy Agency (NEA)
46, quai Alphonse Le Gallo
92100 Boulogne-Billancourt, France
nea@oecd-nea.org **www.oecd-nea.org**

Cover photos: Boston Dynamics' Spot robot (Create Ltd); CORIS360 spatz (ANSTO); Drone testing (PNNL); Robot milling tool (KIT).